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wherein

n is at least 10 and not more than 20,

R_1 is selected from the group consisting of S, CH_3 , and O,

B is selected from the group consisting of thymine, cytosine, adenine, and guanine,

n_1 is at least 3 and not more than 17,

B_1 is selected from the group consisting of thymine, cytosine, adenine, guanine, 5-propyluracil, and 5-propylcytosine,

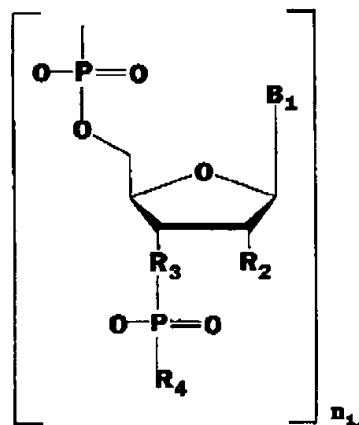
R_2 is selected from the group consisting of H, F, NH_2 , O-alkyl ($C_1 - C_5$), O-allyl, and O-methoxyethoxy,

R_3 is selected from the group consisting of NH and O, wherein if R_3 is NH, R_2 must not be selected from the group consisting of NH_2 , O-alkyl ($C_1 - C_5$), O-allyl, and O-methoxyethoxy,

R_4 is selected from the group consisting of 2',3'-dideoxy-3'-fluoroguanosine, 2',3'-dideoxy-3'-azidoguanosine, 2',3'-dideoxy-3'-aminoguanosine, 2',3'-epoxyguanosine, epoxyguanine, acyclovir, gancyclovir, 2'-deoxyadenosine, 2'-deoxyguanosine, 2'-deoxycytidine, and 2'-deoxythymidine,

L is selected from the group consisting of $-(PO_2)-OCH_2-COH-CH_2-NH-$ and $-(PO_2)-OCH_2-CH(CH_2COOH)-(CH_2)_4-NH-$ and wherein each chimeric oligonucleotide comprises a nucleotide sequence capable of hybridizing to the RNA component of the telomerase.

2. (Original) The oligonucleotides according to claim 1, wherein R is



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5'-TCAGATTAGGACTGCTCAGAGTTAG-3' (SEQ ID No. 2)

5'-TCAGATTAGTACTCGTCAGACAGTTAGGGTTAG-3' (SEQ ID No. 3)

5'-TCAGATTAGTACTCGTCAGAGTTAGAGTTAG-3' (SEQ ID No. 4)

5'-TCAGATTAGGACTGCTCAGAGUUAG-3' (SEQ ID No. 5)

5'-TCAGATTAGGACTGCTCAGAUAGUUAG-3' (SEQ ID No. 6)

5'-TCAGATTAGGACTGCTCAGAGUUAGGGTTAGACAA-3' (SEQ ID No. 7)

5'-TCAGATTAGGACTGCGTTAGGGTTAGACAA-3' (SEQ ID No. 8)

5'-TCAGATTAGTACTCGTCAGA-O(PO₂)OCH₂CH(CH₂COOH-(CH₂)₄-NH-TAGGGTTAGACAA-3' (SEQ ID No. 9)

5'-TCAGATTAGTACTCGTCAGAGTTAGGGTTA-azidodeoxyguanosine-3' (SEQ ID No. 10)

5'-AATCCTCCCCCAGTTCACCC-GTTAGGGT-3' (SEQ ID No. 11)

5'-TCTCCAGCGTGCGCCAT-GUUAGGGUUAG-3' (SEQ ID No. 12)

5'-ATGTATGCTGTGGCT-n(L)-GTTAGG-3' (SEQ ID No. 13)

5'-GTA CTGCTCAGA-GTTAGGGTTAG-3' (SEQ ID No. 14)

5'-GTA CTGCTCAGA-GTTAGGGT-3' (SEQ ID No. 15)

5'-GTA CTGCTCAGA-GUUAGGGUUAG-3' (SEQ ID No. 16)

5'-GTA CTGCTCAGA-n(L)-GTTAGG-3' (SEQ ID No. 17)

5'-GGCCAGCAGCTG-GUUAGGGUUAG-3' (SEQ ID No. 18)

5'-TGCTCAGA-GUUAGGGUUAG-3' (SEQ ID No. 19)

5'-TGCTCAGA-n(L)-GTTAGG-3' (SEQ ID No. 20)

5'-TCAGACATATACTGCTCAGA-n(L)-TAGGGTTAGACAA-3' (SEQ ID No. 21)

5'-ACT GCT CAG A-GTT AG-3' (SEQ ID No. 22)

5'-ACT GCT CAG A-GUU AGG GUU AG-3' (SEQ ID No. 23)

5'-ATA CTG CTC AGA-linker-GTT AGG GTT AG-3' (SEQ ID No. 24)

5'-TTA GTA CTG CTC AGA-GTT AGG GTT AG-3' (SEQ ID No. 25)

5'-TCA GAT TAG TAC TGC TCA GA-GTT AG-3' (SEQ ID No. 26)

5'-TCA GAT TAG TAC TGC TCA GA-GTT AG-3' (SEQ ID No. 27)

5'-ACT GCT CAG A-GTT AGGGTTAG-3' (SEQ ID No. 28)

5'-TTAGGG-3' (SEQ ID No. 29).

7. (Original) A method of inhibiting telomerase activity, comprising the administering of chimeric oligonucleotides to a human tumor cell line.

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8. (Original) A method of in vivo treatment of tumours, comprising the administering of chimeric oligonucleotides in a flank region.

9 (Previously presented). The oligonucleotides of claim 1, wherein said binding to telomerase inhibits the telomerase catalytic activity.

10 (Previously presented). The oligonucleotides of claim 1, wherein said binding to telomerase occurs either inside a eukaryotic cell or in the absence of intact eukaryotic cells.

11 (Previously presented). The oligonucleotides of claim 10, wherein said binding to telomerase occurs inside a tumor cell.

Claim Amendments

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